

To: Russo, Rebecca[Russo.Rebecca@epa.gov]
From: Peterson, Cynthia
Sent: Sat 8/8/2015 5:01:08 PM
Subject: RE: Summary of the evaluation of pH data

Thanks!

Cynthia Peterson

Community Involvement Coordinator

Public Affairs and Community Involvement

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From: Russo, Rebecca
Sent: Saturday, August 08, 2015 10:55 AM
To: Peterson, Cynthia
Subject: FW: Summary of the evaluation of pH data

Rebecca A. Russo

Region 8 Congressional and Intergovernmental Liaison

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From: Russo, Rebecca

Sent: Friday, August 07, 2015 5:20 PM

To: 'john_whitney@bennet.senate.gov'; 'rosemary_rodriguez@bennet.senate.gov'; 'sebastian_dawiskiba@bennet.senate.gov'; 'chuck_poplstein@gardner.senate.gov'; 'betsy_bair@gardner.senate.gov'; 'Marcus, Darlene'; 'Aaron'; 'Swager, Curtis (Gardner)'; 'jennifer_loraine@gardner.senate.gov'; 'chris_hansen@gardner.senate.gov'; 'nicole_frazier@gardner.senate.gov'; 'tim_prowitt@bennet.senate.gov'; 'laura_sherman@bennet.senate.gov'; 'tim.martin@mail.house.gov'; Gray, David; Distefano, Nichole; Levine, Carolyn; Snyder, Raquel

Subject: Summary of the evaluation of pH data

The following is a summary of the evaluation of pH data collected as of August 6, 2015.

Additional information related to additional data, including metals, is being developed and will be provided in a separate statement.

pH (a measure of acidity) was measured at a number of locations along Cement Creek and the Animas River to Durango and beyond to Farmington, New Mexico. Except for locations within Cement Creek, generally, pH levels were measured before the arrival of the contaminant plume and found to range between 6.5 and 7.6. When the contaminated water from the mine release passed a sampling location, the pH lowered (indicating more acid) to approximately 4.8 (below Silverton). A pH of 4.5 is consistent with the pH of a liquid like black coffee. Later, however, in locations down river, the pH began to return to pre-incident levels. Water acidity levels in the Animas above Cement Creek have been consistent over the past two days at approximately 6.4 to 6.8. For reference, the pH of saliva is roughly 6 and the pH of pure water is 7. The acidity level in Cement Creek has remained low at 3.74 since the mine release. Tomato juice and apples also have a pH of approximately 3.74. While this reference information is relevant to skin exposure, the evaluation of impacts of these pH levels on fish and other aquatic life is ongoing.

pH of Common Substances

ACIDIC						NEUTRAL		ALKALINE OR BASIC												
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
Battery Acid	Stomach Acid (Hydrochloric)	Lemon Juice, Vinegar Coke and Pepsi	Grapefruit and Orange Juice	Apples, Dr. Pepper Soda	Tomato Juice, Beer	Acid Rain, 7-UP Soda	Black Coffee, Pepto Bismol	Healthy Skin, Hair and Nails	Urine, Saliva, Milk	"Pure" Water, Blood	Shampoos (7.0 to 10.0)	Baking Soda, Seawater, Eggs	Perm Solutions (8.5 to 9.5)	Toothpaste, Hand Soap	Milk of Magnesia, Mild Detergent	Household Ammonia and Cleaners	Soapy Water	Hair Straighteners (11.5 to 14.0)	Bleach, Oven Cleaner	Liquid Drain Cleaner, Caustic Soda

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